

**DIVISION 6**  
**STRUCTURES**

**6-02 CONCRETE STRUCTURES**

**6-02.1 Description**

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This Section is supplemented with the following:

This work also consists of constructing cast in place cement concrete caps on walls, as indicated on the Plans and specified herein.

**6-02.2 Materials**

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This Section is supplemented with the following:

Cement concrete for wall caps shall be concrete Class 3000.

**6-02.4 Measurement**

(\*\*\*\*\*)

Delete the seventh paragraph of this Section.

Cement Conc. Wall Coping will be measured per square yard along the face of the exposed wall coping from bottom of coping to top of coping.

**6-02.5 Payment**

(\*\*\*\*\*)

This Section is supplemented with the following:

The unit contract price per square yard for "Cement Conc. Wall Coping" shall include all costs for labor, equipment, materials, and tools necessary to furnish and install the complete wall caps as indicated on the Plans, including but not limited to, formwork, cement concrete, reinforcing, anchors, sleeves, hardware, and surface finishing.

**6-07 PAINTING**

**6-07.2 Materials**

(\*\*\*\*\*)

This Section is supplemented with the following:

Paint materials shall comply with the requirements in Section 9-08 unless described otherwise in this Section.

	<b>Glossy Surface</b>	<b>Semi-Gloss Surface</b>	<b>Mat Surface</b>
Thickness	2.5-3.5 mils/60-90	2.5-3.5 mils/60-90	2.5-3.5 mils/60-90
Gloss (1)	80-90	55-70	15-25
Cross Hatch Adhesion (2)	Pass 100%	Pass 100%	Pass 100%
Mandrel Bending (3)	1/8"/3 mm	5/32"/4 mm	3/16"/75 mm
Erichsen Cupping ISO 1520	5/16"/8 mm	1/4"/7 mm	3/16"/5 mm
Impression Hardness (4)	95	95	95
Impact Test (5)	Up to 160"/lb.	Up to 160"/lb.	Up to 160"/lb.
Pencil Hardness (6)	2H (min.)	2H (min.)	2H (min.)
Dry Mill Test	OK	OK	OK
Salt Spray Test (7)	1500 h test, max. undercut 1/16"/1 mm	1500 h test, max. undercut 1/16"/1 mm	1500 h test, max. undercut 1/16"/1 mm
Humidity Resistance (8)	1500 h test, min. blisters 1/16"/1 mm	1500 h test, min. blisters 1/16"/1 mm	1500 h test, min. blisters 1/16"/1 mm

**Key:**

(1) Gloss According to Gardner 60 degrees, ASTM D523.

(2) Cross Hatch Adhesion, ASTM D3359, Method B.

(3) Mandrel Bending Test, ASTM D522.

(4) Impression hardness, ASTM B3363.

(5) Impact Test, ASTM D2794; (0.1) inch distortion.

(6) Pencil Hardness, ASTM B3363.

(7) Salt spray Resistance Test, ASTM B117.

(8) Humidity Resistance Test, ASTM D2247.

**Paint Color/Paint System Table**

<b>Specification Section</b>	<b>Item</b>	<b>Paint Color</b>	<b>Paint System</b>
9-29.6(6)A	Decorative Light Standards - Poles	RAL 9005 "Jet Black"	Refer to specification section below for Decorative Light Standards
9-29.6(6)B	Decorative Light Standards - Luminaire Arms	RAL 9005 "Jet Black"	Refer to specification section below for Decorative Light Standards
9-29-10(2)	Decorative Luminaires	RAL 9005 "Jet Black"	Refer to specification section below for Decorative Luminaires.

## **Powder Coating Paint System**

The powder coating paint system shall be composed of exterior grade pure polyester TGIC, dry powder including resins, and pigments in accordance with requirements of AAMA 605.2, and shall have the following characteristics.

## **Galvanizing**

All fabricated steel components and materials to be galvanized per ASTM 123.

All steel hardware components and materials to be galvanized per ASTM 153.

## **Decorative Light Standards**

All decorative light standard poles and their respective sub-assembly parts (refer to Special Provisions, Sec 9-29.6(6)) shall be factory primed and finish painted with polyester powder coating.

All poles and parts must be cleaned with suitable water-based cleaner and/or solvent to ensure a chemically clean surface free of oils, compounds, and residual soil. The polyester powder coating shall be applied by Electro-Static spray with a voltage maintained at 40-100 KV. A dry film thickness of 2 to 4 mils shall be applied and cured per manufacturer's recommendation. After proper baking, the Contractor must provide certification that the powder passes the tests listed below when made using clean, untreated, aluminum panels:

1. Gloss: Gloss will vary based on powder chosen.
2. Hardness: Pencil hardness shall be H to 2H.
3. Impact: With the finish surface at room temperature (77 degrees Fahrenheit), subject it to a 160 in-lb. Direct impact force by use of a Gardner variable impact tester, Model 1G-1120 (or approved equal) and evaluated per ASTM D-2794.
4. Adhesion: Using a sharp blade, scribe a series of eight parallel cuts through the finish to the base material. Scribe another series of eight parallel cuts at a right angle to and crossing the former cuts to form 1/8 inch squares. Press a strip of pressure sensitive adhesive tape (Scotch Brand No. 600 (or approved equal)) over the squares. After 2 minutes, remove the tape. Results must be level 4 or better as described in ASTM-3359-B.
5. Abrasion Resistance: (Modified ASTM D-4060).
6. Weight loss of coating after 1,000 cycles on Taber abraser equipped with CS-10 wheels and operating less than 1 kg loading per wheel is on the order of 40 to 60 mg.

1 The coating must be chemically resistant and pass the following tests:

2 1. Salt Spray Resistance: Powder-painted product meets the minimum salt spray  
3 resistance standards as set forth in ASTM B117.

4 2. Humidity Resistance: Powder-painted product meets the minimum humidity  
5 resistance standards as set forth in ASTM D2247.

6 3. Weatherability: Powder-painted product meets the minimum weatherability  
7 standards as set forth in ASTM 336.

8 4. Chemical and Solvent Resistance: Polyester family of powder coatings shall be  
9 resistant to most chemicals and solvents except alkalis and ketones. Verification  
10 shall be made for each chemical or solvent proposed for use with the coating.  
11

12 Prior to packaging, poles shall be cradled in 1-inch rubberized foam base. Contractor  
13 shall take precaution to avoid damage during off-loading, handling, and erection. The  
14 finish color shall have anti-graffiti coating.

#### 15 **Decorative Luminaires**

16 All decorative luminaire housings shall be factory painted with polyester powder coating  
17 to meet ASTM-B117/D2247 requirements to salt spray and humidity resistance.

18 **END OF DIVISION 6**